Competitiveness Among Females and Males in Physical Activity Classes

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Absrtact:

Competitive orientations of 237 male and female undergraduates enrolled in competitive and noncompetitive physical activity classes were investigated using the Work and Family Orientation Questionnaire [WOFO: R. L. Helmreich and J. T. Spence, "The Work and Family Orientation Questionnaire: An Objective Instrument to Assess Components of Achievement Motivation and Attitudes Toward Family and Career," Catalog of Selected Documents in Psychology, 1978, 8(2) (Document #1677)] and a Competitiveness Inventory. Factor analysis confirmed the four WOFO dimensions proposed by Helmreich and Spence (mastery, work, competitiveness, personal unconcern). Factor analysis of the Competitiveness Inventory revealed three factors termed competitiveness, goal orientation, and win orientation. Sex x Activity Class (competitive or noncompetitive) (2 x 2) multivariate analyses revealed sex differences on the WOFO scores, both sex and activity differences on the Competitiveness Inventory scores, and no interactions. Sex differences on the WOFO scores confirmed Spence and Helmreich's findings; females scored higher on work and males scored higher on competitiveness. On the Competitiveness Inventory, males scored slightly higher than females on competitiveness, but most of the multivariate sex difference was due to males scoring higher on win orientation and females scoring higher on goal orientation. In contrast, the multivariate activity difference was due primarily to competitiveness; students in competitive activities scored considerably higher on competitiveness than students in non-competitive activities. The findings suggest that sport-achievement orientation has a unique factor structure and provide evidence supporting the validity of the sport-specific, multidimensional Competitiveness Inventory.

Article:

Sex differences in achievement orientation and competitiveness are widely cited in both everyday conversation and psychological literature. Several investigators have probed the psychological aspects of gender roles and achievement, and have provided important insights. However, research specifically directed to competitiveness and sport achievement is sparse.

Neglect of sport achievement is especially disappointing because the influence of gender roles seems more pronounced in sport than in other achievement areas. Traditionally sport is a valid achievement activity for males but not for females. Clearly achievement opportunities for females in sport are expanding at a fantastic rate, and more girls and women are active sport participants than ever before. The national Federation of State High School Associations (1980) reports a 600% increase in the number of girls in interscholastic sports programs between 1970 and 1979. Boutilier and SanGiovanni (1983) note comparable increases in organization and funding of women's intercollegiate sport programs, and also document the increasing sport participation of girls and women outside the educational setting. As well as participating in competitive sports, females are contributing to the current exercise boom (Toufexis, 1985) by engaging in noncompetitive fitness activities. However, this increased participation does not necessarily imply that the psychologically limiting influence of gender roles is decreasing. Indeed, recent research indicates that sex differences persist, and that psychological orientations to competition and sport may present a barrier to females.

Several authors note that females are less competitive than males (e.g., Ahlgren & Johnson, 1979; Olds & Shaver, 1980). In a comprehensive review, Lenney (1977) singled out competition as a situation likely to elicit sex differences in self-confidence, one of the most consistent predictors of success. Duda (1983) examined sport and academic achievement orientation of male and female Anglo and Navajo children, and reported both sex and cultural differences; male Anglo children were the most win-loss oriented, valued athletic ability the most, and reported the most achievement-oriented attributions. Furthermore, Duda observed stronger sex differences for sport than for academic achievement.

Sex differences in competitiveness do not necessarily imply sex differences in sport participation. Persons who are low on competitiveness might pursue personal goals in activities that do not require interpersonal competition. Indeed, many females engage in noncompetitive sport and exercise activities. Nevertheless, interpersonal competition is the dominant sport form today, especially in educational settings, and low levels of competitiveness may well be a major psychological barrier to sport participation. The multidimensional competitiveness measure used in this study was designed to probe individual differences in sport achievement by assessing non-competitive achievement orientations to strive for personal goals in sport as well as achievement orientations toward interpersonal competition.

Because the influence of gender roles on competitiveness and achievement behavior seems to be alive and well in sport, and because sport is a unique setting virtually ignored in the literature, the current study approached competitiveness as a sport-specific construct. Specifically, the competitive orientations of females and males enrolled in competitive and noncompetitive physical activity classes were assessed using a multidimensional, sport-specific Competitiveness Inventory.

The impetus for developing the Competitiveness Inventory and for furthering research on sex differences in competitiveness stemmed from two major sources—Spence and Helmreich's (Helmreich & Spence, 1978; Spence & Helmreich, 1978, 1983) work on achievement motivation, and Martens' (1977) competitive anxiety work demonstrating the value of sport-specific constructs and measures.

Sex differences have been reported in the earliest achievement work when McClelland, Atkinson, Clark, and Lowell (1953) observed that women's achievement scores did not increase as men's did in response to achievement- arousing instructions. Horner (1968) proposed a "fear-of-success" construct, described as fear of the negative consequences of achievement, particularly social rejection, to account for sex differences in achievement motivation. Subsequent research (e.g., Condry & Dyer, 1976; Tresemer, 1977) raised doubts about Horner's construct and measure, but research has continued to document sex differences in achievement motivation and behaviors.

Much of the current work on sex and gender differences in achievement emphasizes individual differences in achievement cognitions. Considerable research indicates that expectancies relate to achievement behavior, and further reveals that females report lower expectancies of success than do males. Eccles and her colleagues (Eccles, 1983; Eccles, Adler, & Meece, 1984) take an Expectancy x Value approach, and their findings suggest that task value is the strongest mediator of sex differences in academic achievement choices. In general, research suggests that sex differences are neither fixed nor universal, but may vary with the task, social situation, and previous experiences (Deaux, 1976, 1984; Frieze, Parsons, Johnson, Ruble, & Zellman, 1978; Stein & Bailey, 1973).

Spence and Helmreich proposed that a clearer picture of sex roles and achievement might emerge by considering the dimensions of achievement motivation. Building upon previous work, Helmreich and Spence (1978) constructed the Work and Family Orientation Questionnaire (WOFO), which includes a 23-item achievement motivation measure. Factor analyses yielded four similar factors for females and males: (1) work — the desire to work hard and do a good job; (2) mastery—the desire for challenge and meeting internal standards of excellence; (3) competitiveness — the desire to succeed in competitive, interpersonal situations; and (4) personal unconcern— attitudes about the possible negative consequences of achievement. Spence and

Helmreich reported that the personal unconcern scale has been of little value in their research, but the three achievement scales of mastery, work, and competitiveness relate to gender roles and achievement behavior. Typically, males score higher on mastery and competitiveness, and females score higher on work. When comparing gender-role personality characteristics and achievement orientation, Spence and Helmreich reported that for both males and females, masculine (instrumental) scores positively relate to all three achievement scores, and feminine (expressive) scores are slightly positively related to work and slightly negatively related to competitiveness. When masculine and feminine personality scores were used to classify individuals, androgynous individuals scored highest on both mastery and work followed by masculine, feminine, and finally undifferentiated individuals. For competitiveness, masculine individuals scored highest and feminine individuals lowest, suggesting that the relationship between competitiveness and gender roles differs from the relationship between gender roles and the other achievement dimensions.

Spence and Helmreich also compared the WOFO scores of high- achieving male and female academic scientists, university athletes, and general university students. The scientists (both female and male) had the highest scores on mastery and work, followed by the athletes. For competitiveness, though, the athletes had the highest scores. Helmreich and Spence also noted that for scientists both mastery and work were positively related to success (citations). Surprisingly, the most successful scientists were high on mastery and work but *low* on competitiveness (Helmreich, Beane, Lucker, & Spence, 1978). Helmreich and Spence noted that competitiveness may well be positively related to success in athletics, but this relationship remains to be tested.

Although Helmreich and Spence have not examined competitiveness and sport achievement in detail, their findings have implications for the current research. First, the relationship of competitiveness to gender roles and achievement success differs from the relationships for the other achievement dimensions. Second, sport may well be a unique achievement situation that elicits unique relationships among achievement orientation, gender roles, and achievement behaviors.

Despite the implications of Spence and Helmreich's work, WOFO is a general achievement measure and is not designed explicitly for sport- achievement settings. As Spence and Helmreich (1983) themselves noted, nearly all achievement motivation measures and research are restricted to formal academic and vocational settings. Much achievement activity occurs in other settings, including sport, but the relevance of existing theories and measures for such setting must be questioned.

The value of sport-specific constructs and measures for investigating and explaining psychological behaviors and reactions in sport has been demonstrated in Martens' (1977) work on competitive anxiety. Martens developed the Sport Competition Anxiety Test (SCAT) to assess competitive trait anxiety, and reported excellent reliability and validity for SCAT. Furthermore, several studies (Gill & Martens, 1977; Martens & Gill, 1976; Martens & Simon, 1976; Scanlan, 1977) have indicated that SCAT predicts state anxiety in sport competition significantly better than do general trait anxiety measures. Quite likely a sport-specific measure of competitiveness and sport-achievement orientation will predict achievement behaviors and reactions in sport competition better than more general achievement- motivation measures.

Thus, a sport-specific Competitiveness Inventory has been developed to assess the desire to strive for and to achieve success in sport. The initial version of this inventory and the WOFO (Helmreich & Spence, 1978) were administered to undergraduate male and female students enrolled in competitive and noncompetitive physical activity classes. This exploratory investigation had two purposes: **(1)** to initiate psychometric testing of the Competitiveness Inventory and determine its basic factor structure, and (2) to compare the competitiveness and achievement orientation scores of females and males in competitive and noncompetitive physical activity classes.

METHOD

Subjects

A total of 237 male and female undergraduate students enrolled in physical activity skills classes at the University of Iowa completed the Competitiveness Inventory and the WOFO on the first day of their classes. Skills classes are required of all liberal arts students, but students may choose among the many activities offered. For this study, classes were selectively sampled to include both competitive (softball, tennis, volleyball, fencing) and noncompetitive (archery, bowling, jogging, aerobics, fitness swim) activities. Overall, more students were enrolled in noncompetitive classes (40 males; 100 females) than in competitive classes (33 males; 64 females). Although the cell sizes were unequal, the smallest cell had over 30, and the two independent variables (sex and activity class) were not correlated *(r* = .06). Thus, the unequal cell sizes presented no problems for the subsequent analyses.

Questionnaires

WOFO. This is a 32-item measure of achievement motivation and attitudes toward family and career developed by Helmreich and Spence (1978). Only the 23 items that deal with achievement motives were used for this study. As discussed earlier, factor analyses of these 23 items yielded four scales, designated as work, mastery, competitiveness, and personal unconcern. Helmreich and Spence reported satisfactory reliabilities, with alpha coefficients ranging from lows of .50 in both sexes on personal unconcern to .76 and .72 for competitiveness in male and females, respectively. They also noted that the relationships between the scales and psychological masculinity and femininity, and the differences on scale scores among college students, athletes, and scientists, discussed earlier, are theoretically sensible results providing evidence for the construct validity of the WOFO scales.

Competitiveness Inventory. The Competitiveness Inventory follows the same format as the WOFO. All items are rated on a 5-point scale *(strongly agree, slightly agree, neither agree nor disagree, slightly disagree, strongly disagree).* A pool of items representing achievement orientation in sport was developed by consulting with sport psychology experts, by reviewing the achievement and sport competition literature, and by soliciting open-ended responses from a diverse sample of sport participants. A pool of 58 items was circulated to five raters, all graduate students in sport psychology, who rated each item for clarity and content. Only items rated as definitely clear and definitely representative of achievement motivation in sport by all raters were retained for the inventory. The 32-item Competitiveness Inventory was then administered to a pilot sample of 10 individuals. None of the 10 pilot subjects reported any unclear or ambiguous items, or offered any further suggestions for revision.

Procedures

Instructors of the classes selected for the study were contacted prior to the start of classes to obtain permission to administer the questionnaires. All instructors agreed to permit the testing. On the first day of classes a graduate assistant attended each class, explained the general purpose of the study and administered the two questionnaires. Although participation was voluntary, all individuals contacted agreed to complete the questionnaires.

RESULTS

Analyses were conducted and the results are presented in two major sections. First, separate factor analyses were performed for the two questionnaires. WOFO items were analyzed to compare with the factor structure reported by Helmreich and Spence, and items from the Competitiveness Inventory were analyzed to determine the factor structure of this measure.

The second set of analyses involved comparing the WOFO and Competitiveness Inventory scores of males and females in competitive and noncompetitive activity classes. The four WOFO scores (mastery, work, competitiveness, personal unconcern) were analyzed as dependent variables in a Sex x Activity Class (2 x 2) MANOVA. Similarly, the three competitiveness scores that emerged from the factor analysis of this inventory were analyzed in a separate Sex x Activity class (2 x 2) MANOVA.

Factor Analysis Results

WOFO. Individual items on the WOFO questionnaire were factor analyzed using a principal-components analysis and varimax rotation. The four factors that emerged confirmed the four dimensions of mastery, work, competitiveness, and personal unconcern proposed by Helmreich and Spence. As Table I indicates, nearly all items had their highest factor weights on the dimensions with which they are associated. Two items identified as mastery by Helmreich and Spence did not have high factor weights on that factor; item 4 did not have high weights for any factor, and item 22 had its highest weight for work rather than mastery. Item 5, which is associated with personal unconcern by Helmreich and Spence, did not have any high factor weights. It should be noted that Helmreich and Spence also reported relatively low factor weights for each of these three items. In all other cases the items had their highest weights on the appropriate factor. Thus, with these minor deviations, the factor analysis results here confirm Helmreich and Spence's identified factor structure.

Competitiveness Inventory. Principal components analysis and varimax rotation were also used with the items on the Competitiveness Inventory. The factor weights for the three-factor solution, which emerged as the most appropriate factor structure, are presented in Table II. Individual items that had a factor weight of at least .50 on one factor are grouped under that factor, and the five items that did not have high weights on any factor are omitted from the table. The first factor, labeled "competitiveness," accounted for 51.4% of the variance and seems to represent the desire to strive for success and to achieve in sport competition. The second factor, labeled "goal orientation," accounted for 25.1% of the variance and reflects an emphasis on personal standards and goals in competition (e.g., "I set goals for myself when I compete," "Reaching personal performance goals is very important to me"). The final factor, which accounted for 23.5% of the variance, reflects a focus on the win-loss outcome of competition (e.g., "Winning is important," "I hate to lose") and is labeled "win orientation." Internal consistencies were calculated for each factor, and the resulting alpha coefficients (.94

Table I. WOFO Factor Weights

Item	Factor			
	Mastery	Work	Competi-tiveness	Personal unconcern
Mastery				
1. I would rather do something at which I feel confident and relaxed than something which is challenging and difficult.	.72	−.04	−.01	.05
4. When a group I belong to plans an activity, I would rather direct it myself than just help out and have someone else organize it.	.13	.14	.13	−.42
6. I would rather learn easy fun games than difficult thought games.	.50	.08	.02	.05
10. If I am not good at something I would rather keep struggling to master it than to move on to something I may be good at.	.49	.15	.07	−.16
12. Once I undertake a task, I persist.	.46	.41	.20	.23
13. I prefer to work in situations that require a high level of skill.	.44	.22	.39	−.13
16. I more often attempt tasks that I am not sure I can do than tasks that I believe I can do.	.54	.02	.11	−.20
22. I like to be busy all the time.	.29	.47	.09	−.11
Work				
2. It is important for me to do my work as well as I can even if it isn't popular with my co-workers.	−.11	.59	.11	−.01
9. I find satisfaction in working as well as I can.	.12	.63	−.19	.03

14. There is satisfaction in a job well done.	.01	.56	.06	.08
18. I find satisfaction in exceeding my previous performance even if I don't outperform others.	−.03	.60	.01	.01
19. I like to work hard.	.36	.62	−.02	.03
20. Part of my enjoyment in doing things is improving my past performance.	.29	.62	.14	−.17
Competitiveness				
3. I enjoy working in situations involving competition with others.	.26	.03	.70	−.03
7. It is important to me to perform better than others on a task.	−.05	−.01	.75	−.14
15. I feel that winning is important in both work and games.	.06	−.09	.78	.05
21. It annoys me when other people perform better than I do.	−.42	−.06	.47	−.36
23. I try harder when I'm in competition with other people.	.12	.21	.70	.02
Personal unconcern				
5. I feel that good relations with my fellow workers are more important than performance on a task.	.23	−.24	.04	.10
8. I worry because my success may cause others to dislike me.	.20	−.01	−.05	.76
11. I avoid discussing my accomplishments because other people might be jealous.	−.04	−.01	−.06	.65
17. I sometimes work at less than my best because I feel that others may resent me for performing well.	−.12	.10	.09	.66

Table II. Factor Weights for Competitiveness Items

Item	Factor		
	Competitiveness	Goal	Win
Competitiveness			
I am a competitive person.	.74	.03	.20
I try my hardest to win.	.77	.08	.20
I am a determined competitor.	.80	.10	.08
I want to be the best every time I compete.	.56	.23	.27
I look forward to competing.	.83	.09	.11
I thrive on competition.	.76	.11	.30
My goal is to be the best athlete possible.	.71	.22	.21
I enjoy competing against others.	.80	.06	.16
I want to be successful in sports.	.74	.15	.16
I work hard to be successful in sports.	.76	.26	.08
The best test of my ability is competing against others.	.72	.05	.22
I look forward to the opportunity to test my skills in competition.	.81	.14	.07
I perform my best when I am competing against an opponent.	.66	.11	.34
Goal			
I set goals for myself when I compete.	.36	.61	.03
I am most competitive when I try to achieve personal goals.	−.01	.59	−.03
I try hardest when I have a specific goal.	−.00	.70	.01
Reaching personal performance goals is very important to me.	.09	.79	.03
The best way to determine my ability is to set a goal and try to reach it.	.01	.68	.01
Performing to the best of my ability is very important to me.	.28	.61	−.06
Win			
Winning is important.	.51	.17	.58
Finishing the race is more important than winning.	−.03	.39	−.59
Knowing that I performed well is a greater reward than the actual win.	.08	.44	−.58
Scoring more points than my opponent is very important to me.	.38	.12	.63
I hate to lose.	.27	.21	.72
The only time I am satisfied is when I win.	.16	−.07	.75
Losing upsets me.	.19	.05	.76
I have the most fun when I win.	.45	.06	.51

for competitiveness, .85 for win orientation, and .80 for goal orientation) provided strong evidence for the reliability of the three factors.

MANOVA Results

WOFO. The four WOFO scores were analyzed in a Sex x Activity Class (2 x 2) MANOVA. The analysis revealed a sex main effect [F(4, 230) =

Table III. Sex Differences on WOFO Scores

WOFO	Mean for males	Mean for females	Univariate *F*	Univariate *P*	Discriminant coefficient
Work	20.77	21.48	4.37	.05	.67
Competitiveness	14.19	12.63	9.57	.01	−.78
Mastery	20.14	19.88	n.s.		−.20
Personal unconcern	9.10	9.32	n.s.		.08

3.82, $p < .01$], but no activity class main effect or interaction. The mean scores for males and females, univariate *F* values for the sex main effect, and standardized discriminant function coefficients for the sex difference are presented in Table III. As the significant univariate *F* values and relatively high discriminant coefficients for work and mastery indicate, the multivariate main effect for sex was due to males scoring higher than females on competitiveness and females scoring higher than males on work.

Competitiveness. Competitiveness scores were calculated by summing the unweighted items scores of all items associated with each factor, as indicated in Table II, with the two negatively weighted win items reverse scored. Table IV presents the mean, standard deviation, and possible range of scores for each of the three scales. The Sex x Activity Class (2 x 2) MANOVA on these three total scores yielded both a sex main effect [F(3, 231) = 13.55, $p < .001$] and an activity class main effect [F(3,.231) = 9.37, $p < .001$], but no interaction.

As the means and univariate results in Table V indicate, all three scores contributed to the multivariate difference. Although the difference between the mean scores of males and females appears largest for competitiveness, this scale included more items, had a larger range, and had a much larger standard deviation than the other two scales. The low discriminant coefficient for competitiveness and the univariate results reveal that the strongest sex difference was on win orientation, with males scoring considerably higher than females. Females scored higher than males did on goal orientation, and males scored slightly higher than females on competitiveness.

The univariate results for the activity class difference, shown in Table VI, revealed a much different pattern. Competitiveness was the primary con-

Table IV. Mean Scores for the Competitiveness Inventory

Competitiveness scale	Number of items	Possible range	Mean	Standard deviation
Competitiveness	13	13–65	46.85	11.19
Goal	6	6–30	25.48	3.34
Win	8	8–40	21.42	5.70

Table V. Sex Differences on Competitiveness Scores

Competitiveness scale	Mean for males	Mean for females	Univariate *F*	Univariate *P*	Discriminant coefficient
Competitiveness	49.67	45.60	6.06	.05	−.21
Goal	24.52	25.90	8.61	.01	.62
Win	24.52	20.18	27.62	.001	−.77

tributor to the multivariate activity class difference, and neither win orientation nor goal orientation revealed significant univariate activity class differences. Students in competitive activity classes scored considerably higher than students in noncompetitive activity classes on competitiveness.

DIFFERENCES

Factor analysis of the Competitiveness Inventory revealed a clear and logical factor structure. The first factor, which accounted for the greatest share of the variance, seemed to reflect an achievement orientation to competitive sports. Most of the items associated with the first competitiveness factor reflected a desire to compete and to strive for success in sports. The other two factors seemed to emphasize the outcomes of competition rather than the competition process itself. The win-orientation factor reflected a desire to win and to avoid losing in competition, whereas the goal-orientation factor reflected an emphasis on setting and on reaching personal standards in sport.

In one sense, the three factors of competitiveness, goal orientation, and win orientation might be sport-specific counterparts of the mastery, work, and competitiveness dimensions of the WOFO scale. Competitiveness seems to reflect an emphasis on excellence, goal orientation focuses on working hard to achieve personal standards, and win orientation is similar to the desire for success in interpersonal competition. As the intercorrelations in Table VII show, the associated scales do exhibit moderate correlations. The WOFO mastery score is positively related to competitiveness, work is positively related

Table VI. Activity Class Differences on Competitiveness Scores

Competitiveness scale	Mean for competitive classes	Mean for noncompetitive classes	Univariate F	Univariate P	Discriminant coefficient
Competitiveness	50.25	44.50	16.36	.001	1.27
Goal	25.26	25.63	n.s.		−.60
Win	21.70	21.23	n.s.		−.50

Table VII. Intercorrelations of WOFO and Competitiveness Scores

	WOFO			
Competitiveness scale	Mastery	Work	Competitiveness	Personal unconcern
Competitiveness	.415[c]	.193[b]	.653[c]	.022
Goal	.271[c]	.432[c]	.207[b]	−.002
Win	.079	−.140[a]	.615[c]	−.074

[a] $p < .05$.
[b] $p < .01$.
[c] $p < .001$.

to goal orientation, and the WOFO competitiveness score is positively related to win orientation. However, the correlations are only in the moderate range and the WOFO competitiveness score is positively correlated with the competitiveness score as well as with the win-orientation score of the Competitiveness Inventory. It appears, therefore, that competitiveness is not only a sport-specific form of achievement motivation, but also that the basic factor structure of competitiveness differs from the general achievement orientation structure identified by Helmreich and Spence.

Differences between the sport-specific competitiveness measure and general achievement orientation are even more pronounced in the comparisons among females and males in competitive and noncompetitive activity classes. Analysis of the WOFO scores confirmed the previous findings of Helmreich and Spence; males scored higher on competitiveness and females scored slightly higher on work. Sex differences on the Competitiveness Inventory scores were stronger and also revealed a different pattern. Males scored higher than females on competitiveness, but that was the weakest sex difference. Sex differences on competitiveness seemed to reflect different orientations to competition, with males much more oriented to win-loss outcomes and females more oriented to personal goals and standards. This pattern suggests that females and males may be similarly competitive and strive for achievement success in sport, but focus on different outcomes or goals.

Analysis of the Competitiveness Inventory scores also revealed an activity class difference. Although competitiveness was the weakest discriminator for the sex difference, competitiveness was the primary

discriminator between students in competitive activities and those in noncompetitive activities. This finding provides some initial support for the validity of the Competitiveness Inventory. Indeed, if a competitiveness measure is valid, individuals who score high on competitiveness should seek out competitive activities, whereas those individuals who score low on competitiveness should be less likely to participate in competitive activities. Notably, neither the WOFO competitiveness score nor any of the other WOFO dimensions differentiated students in competitive and noncompetitive activities, suggesting that a sport-specific measure may be more appropriate for sport- achievement settings.

The lack of activity class differences on the win and goal-orientation scores is also notable, especially when both measures revealed sex differences. Perhaps individuals who are highly competitive may be competitive for varying reasons, may approach competition from varying perspectives, or may focus on achieving varying competitive outcomes. The competitiveness scale of the Competitiveness Inventory seems to tap the basic desire to enter and to strive for success in competitive situations. Although competitiveness often is assumed to reflect a win orientation, the results reported here suggest otherwise. Individuals in competitive classes were no more win oriented than individuals in noncompetitive classes. Quite possibly, win and goal orientations influence behaviors within competitive and noncompetitive sport activities. However, competitiveness, defined and measured separately from those two orientations, appears to be the construct responsible for individual differences in the choice to enter competitive situations. Indeed, competitiveness scores were related to the choice to enroll in competitive rather than noncompetitive activity classes *(r* = .25, $p < .001$) in this study, but neither win nor goal orientation showed any predictive relationship. Similarly, discriminant analysis results reported in Table VI revealed that competitiveness clearly differentiated individuals in competitive and noncompetitive classes, whereas neither goal nor win orientation showed such predictive ability. In any event, the findings suggest that sport-achievement orientation has a unique factor structure, and that a sport-specific, multidimensional measure of competitiveness may provide valuable insights into the sport achievement orientations and behaviors of females and males.

REFERENCES

Ahlgren, A., & Johnson, D. W. Sex differences in cooperative and competitive attitudes from the 2nd through the 12th grades. *Developmental Psychology,* 1979, *15,* 45-49.

Boutilier, M. A., & SanGiovanni, L. *The sporting woman.* Champaign, Ill.: Human Kinetics, 1983.

Condry, J., & Dyer, S. Fear of success: Attribution of cause to the victim. *Journal of Social Issues,* 1976, *32,* 63-83.

Deaux, K. *The behavior of men and women.* Monterey, Calif.: Brooks/Cole, 1976.

Deaux, K. From individual differences to social categories. *American Psychologist,* 1984, *39,* 105-116.

Duda, *J. A multidimensional approach to the study of sex and cultural differences in motivation.* Paper presented at the North American Society for the Psychology of Sport and Physical Activity Conference, East Lansing, Michigan, 1983.

Eccles (Parsons), J. Expectations, values and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motives.* San Francisco, Calif.: W. H. Freeman, 1983.

Eccles (Parsons), J., Adler, T., & Meece, J. L. Sex differences in achievement: A test of alternate theories. *Journal of Personality and Social Psychology,* 1984, *46,* 26-43.

Frieze, I. H., Parsons, J. E., Johnson, P. B., Ruble, D. N., & Zellman, G. L. *Women and sex roles: A social psychological perspective.* New York: W. W. Norton, 1978.

Gill, D. L., & Martens, R. The role of task type and success-failure in group competition. *International Journal of Sport Psychology,* 1977, *8,* 160-177.

Helmreich, R. L., Beane, W. E., Lucker, G. W., & Spence, J. T. Achievement motivation and scientific attainment. *Personality and Social Psychology Bulletin,* 1978, *4,* 222-226. Helmreich, R. L., & Spence, J. T. The work and Family Orientation Questionnaire: An objective instrument to assess components of achievement motivation and attitudes toward family and career. *Catalog of Selected Documents in Psychology,* 1978, 8(2). (Document #1677).

Horner, M. *S. Sex differences in achievement motivation and performance in competitive and noncompetitive situations.* Unpublished doctoral dissertation, University of Michigan, 1968.
Lenney, E. Women's self-confidence in achievement situations. *Psychological Bulletin,* 1977, *84,* l-13.
Martens, R. *Sport Competition Anxiety Test.* Champaign, Ill.: Human Kinetics, 1977. Martens, R., & Gill, D. L. State anxiety among successful and unsuccessful competitors who differ in competitive trait anxiety. *Research Quarterly,* 1976, 47, 698-708.
Martens, R., & Simon, J. Comparison of three predictors of state anxiety in competitive situations. *Research Quarterly,* 1976, 47, 381-387.
McClelland, D. C., Atkinson, J. W., Clark, R. A., & Lowell, E. L. *The achievement motive.* New York: Appleton-Century-Crofts, 1953.
National Federation of State High School Associations. *Interscholastic athletic participation survey,* September 15, 1980.
Olds, D. E., & Shaver, P. Masculinity, femininity, academic performance and health: Further evidence concerning the androgyny controversy. *Journal of Personality,* 1980, 48, 323-341. Scanlan, T. K. The effects of success-failure on the perception of threat in a competitive situation. *Research Quarterly,* 1977, *48,* 144-153.
Spence, J. T., & Helmreich, R. L. *Masculinity and femininity: Their psychological dimensions, correlates and antecedents.* Austin: University of Texas Press, 1978.
Spence, J. T., & Helmreich, R. L. Achievement-related motives and behaviors. In J. T. Spence (Ed.), *Achievement and achievement motives.* San Francisco, Calif.: W. H. Freeman, 1983.
Stein, A. H., & Bailey, M. M. The socialization of achievement orientation in females. *Psychological Bulletin,* 1973, *80,* 345-366.
Toufexis, A. The shape of the nation. *Time,* October 7, 1985, pp. 60-61.
Tresemer, D. W. *Fear of success.* New York: Plenum, 1977.